

NO PAD #39 — MSC's back-forty was the launch site over the past weekend when 45 members of the Model Rocketeers of Texas assembled for preliminaries of the National Rocketry Championships at MSC the week of August 17. Charles Biggs, chief of Public Affairs Office Exhibits and Artifacts, MSC Coordinator, supervises as one youngster prepares his rocket model for launch. In Photo below an unidentified Texas youth watches his 24 inch rocket as it begins its airborne journey as 'Old Glory' waves majestically in the background.

MSC Site for 200 Launches, Preliminary to National Event

Despite muddy ground, occasional showers and gusty winds 45 young model rocketeers took part June 27-28 in Texas area preliminaries to the national rocket championships which will be held at the Manned Spacecraft Center the week of August 17.

Everything needed for a launch—instrumented launch pads, control center, range safety and recovery personnel—was located in the field west of the antenna test range, near Bldg. 14. Winners of the two day event which saw a total of 200 launches will represent TEXAREA II in the National Championships.

A brief cloudburst at the height of activities on Saturday muddied up the area but failed to dampen the enthusiasm of the participants or their adult supervisors. Charles Biggs, MSC Coordinator, reported the rockets, which ranged up to two feet in length, reached altitudes of 1,500 to 2,000 feet.

Each of the 45 participants made his own rocket.

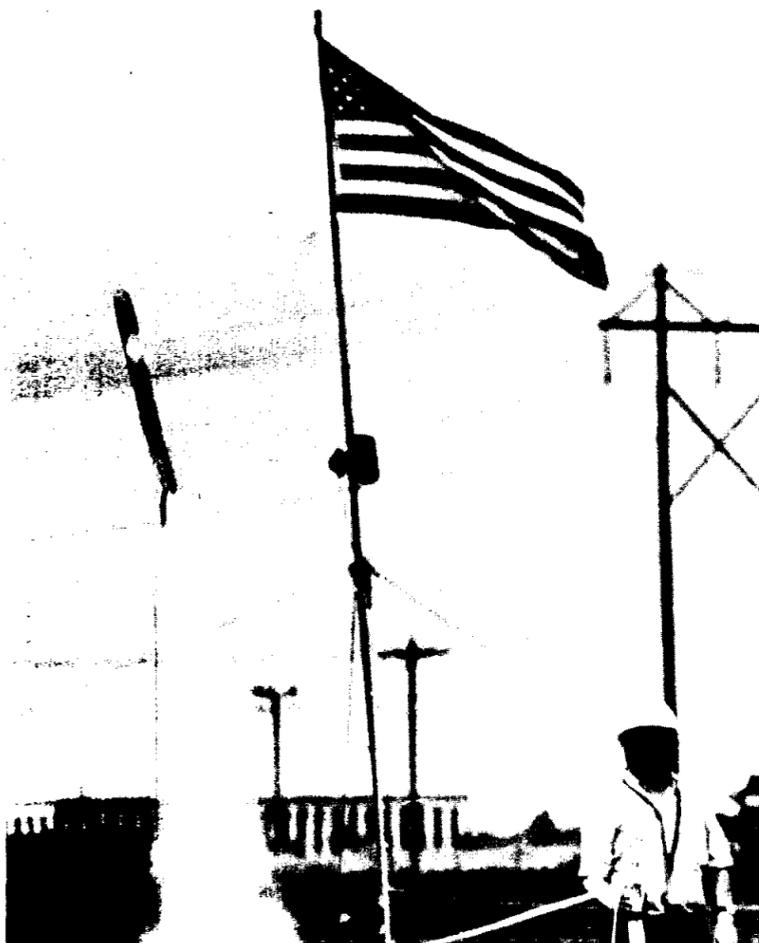
Rigid safety requirements of the sponsoring organization, the National Association of Rocketry, require the rockets to be propelled by a special factory manufactured solid propellant engine.

Each rocket, made of balsa wood and cardboard, has its own parachute recovery system.

The two day program was divided into the following events: parachute duration, parachute spot landing, boost-glide duration, scale models, scale altitude event and the egg loft. The egg loft was by far the most unusual event which the rocketeers tried

for the highest altitude with a cargo of one raw egg. It was to have been returned unbroken to the ground. Glenn Watts of Houston was the winner of the egg loft event.

(See *Rockets Page 3*)



January 31, 1971

Apollo 14 Modifications Cause Delay in Launch

Changes to be made in the Apollo spacecraft and procedures before the Apollo 14 mission will require postponing the launch to no earlier than Jan. 31, 1971.

The changes and new date were announced June 30 by Dr. Thomas O. Paine, Administrator of the National Aeronautics and Space Administration, following a review of recommendations of the Apollo 13 Review Board, an evaluation of the Board's report by the NASA Aerospace Safety Advisory Panel, and recommendations by NASA's Office of Manned Space Flight.

The Review Board had reported that a short circuit ignited electrical insulation in spacecraft oxygen tank No. 2, causing failure of the tank, subsequent loss of electrical power and abort of the lunar-landing mission 200,000 miles from Earth on April 13.

Command and Service Module systems will be modified to eliminate potential combustion hazards in high-pressure oxygen of the type revealed by the Apollo 13 accident.

In addition, a third oxygen tank will be added to the Service Module to avoid operations in low oxygen conditions, thereby making possible the removal of unsealed fan motors in the tanks.

Use of Teflon, aluminum, and other materials potentially combustible in the presence of high-pressure oxygen will be minimized throughout the high-pressure oxygen system and kept away from possible ignition sources.

All electrical wires will be stainless-steel sheathed and the quantity probe will be stainless steel instead of aluminum.

The fuel cell oxygen supply valve will be redesigned to isolate Teflon-coated wires from the oxygen.

Warning systems on board the spacecraft and at Mission Control will be modified consistent with the Board's recommendations to provide more immediate and visible warnings of system anomalies.

A comprehensive review of spacecraft equipment and procedures and use of Command Service Modules and Lunar Modules in "life-boat" modes is now underway at the Manned Spacecraft Center in Houston.

NASA will take steps to disseminate widely throughout industry and the technical community the lessons of Apollo 13 to prevent recurrences in other areas. In this connection, Dr. Paine told the Senate Committee on Aeronautical and Space Sciences June

(See *Apollo 14 Page 4*)

Cooper Resigns To Take Business Post

L. Gordon Cooper, one of the seven original Mercury astronauts and veteran of two space flights, is resigning effective July 31 to become a Washington business executive.

His retirement as an Air Force colonel is effective the same day.

Cooper is one of two Mercury astronauts still on flight status (the other is Alan Shepard). Cooper joined NASA in April 1959. His first mission was the Mercury-Atlas 9 flight, a 22-orbit, 34-hour mission which concluded that program on May 16, 1963. It was also the longest of the Mercury flights and an important step in demonstrating that relatively long periods of space had no serious permanent physical effects on the human system.

Cooper's second space flight was as command pilot of the 8-day, 120 revolution Gemini 5 mission, which began on August 21, 1965, and set a new manned flight endurance record. He was the first man to make a second orbital flight and accumulated 222 hours and 15 minutes in space, also a record.

Following the conclusion of the Gemini program, Cooper was assigned to important tasks in the

Apollo and Apollo Application (Skylab) programs. In addition to demanding test jobs, both as an astronaut and engineer, Cooper served as backup command pilot for Gemini 12 and backup command for Apollo 10.

Cooper said that following his resignation from NASA and Air Force Retirement, he is to become President of National Exhibits, Inc., and member of the Board and engineering consultant to Intersales, Ltd., both Washington-based enterprises. National Exhibits was formed to establish a new convention center and a permanent exposition promoting exhibits from the fifty states. Intersales is an International export marketing organization formed in 1958.

(See *Cooper Page 4*)



L. Gordon Cooper

THE ASTRONUTS

courtesy of TRW's gordon a. south



LATE AGAIN . . . !

Two Earth Resources Instrument Contracts Awarded for Skylab

The NASA has awarded separate contracts for the design, development and delivery of instruments for the Earth Resources Experiment Package to be flown in the Workshop of the Skylab manned space flight program in 1972.

The General Electric Co., Valley Forge, Pa., was selected for the microwave radiometer-scatterometer/altimeter instrument. Value of the cost-plus-incentive fee contract is \$5 million.

Honeywell, Inc., Boston, Mass., was awarded the contract for the

design, development and delivery of a 10-band multispectral scanner instrument. This cost-plus-incentive fee contract is \$3 million.

Principle objectives of the Earth Resources experiments are to gather data over a broad portion of the electromagnetic spectrum for Earth resources studies, using man in selecting sites and operating instruments for specific measurements, and to help determine the optimum sensors and techniques for application in future Earth orbital, manned and automated, information gathering systems.

MSC Reviews 300 Science Proposals

Three hundred scientific proposals detailing analysis of lunar samples returned on future Apollo missions are currently being reviewed by the National Aeronautics and Space Administration.

The proposals were submitted by scientists from the U. S. and 25 foreign countries. The NASA in March 1970 invited the international scientific community to propose studies of Moon rocks and soil expected to be recovered by Apollo missions 14 through 19.

The research proposals are being evaluated on the basis of scientific merit. The investigators proved ability, the readiness of his laboratory to conduct the proposed studies and the amount of lunar material and NASA funds required.

Scientists at the Manned Spacecraft Center are reviewing the research proposals. The review process is being coordinated at MSC by the Lunar Sample Office of the Science and Applications Directorate. John W. Harris is manager of the Lunar Sample Office.

One hundred and fifty of the 192 scientists currently analyzing Apollo 12 lunar material have submitted proposals to conduct studies on samples from Apollo missions 14 through 19.

Seventy-four of the 300 proposals are from scientists representing Australia, Austria, Belgium, Brazil, Canada, Ceylon, Czechoslovakia, England, Finland, France, Germany, Greece, the Netherlands, Italy, Japan, Korea, Norway, Scotland, South Africa, Spain, Sweden, Switzerland and West Pakistan.

MSC Summer Aid Program Employs 110

by John Sonneman

A recent issue of the *Roundup* carried an article about the MSC Summer Intern Program for graduate students. Well, NASA also has programs for students who are studying for their first diploma or degree.

A total of 102 high school students and 8 college sophomores are working at the Center under the President's 1970 Federal Summer Employment Program for Youth.

The Summer Aids, for that is their title, are residents of the Houston area: La Porte, Dickinson, League City, Baytown, and other nearby towns and cities, including Houston proper. Arriving at Ellington AFB or the site each morning, the 104 girls and 6 young men go to work in 33 different MSC organizations. Most of the Summer Aids are working in clerical/secretarial jobs—filing, typing, duplicating, or answering telephones; a few are serving in more technical occupations.

The students will spend most of the summer at their work assignments, but they will also participate in activities which will acquaint them with future educational and employment opportunities. For example, representatives from the Labor Department, the

Civil Service Commission, and the Social Security Administration will talk to the Summer Aids about the labor market, forecasting requirements and offering advice on career planning and preparation.

The Summer Aids further their educational plans by attending a forum on College & College financing presented by the University of Houston and Texas Southern University, as well as by listening to MSC Co-op students talk about college life.

The Summer Employment Program is coordinated by Mrs. Charlesetta Lacy of the Employee Development Branch. Mrs. Lacy, who received her BA in Guidance and Counseling from Tennessee State University, taught in the Dallas Independent School District and in the Adult Education Program of the Houston School District before coming to MSC for the summer.

Mrs. Lacy is currently planning an Awards Banquet, to be held at the end of August, at which the outstanding Summer Aids will receive citations. The decisions about the most deserving of the Summer Aids will be made by their supervisors. Co-workers of the students will be welcome at the Banquet.



SUMMER AID'S ORIENTATION TOUR

MSFC Builds Largest Solar Array for Skylab

Engineers at the NASA-Marshall Space Flight Center have designed the largest solar cell array system for electric power ever devised for a spacecraft.

The array will turn sunlight into electric power for the Saturn Workshop and Apollo Telescope Mount, major components of the Skylab cluster to be placed in earth orbit in late 1972.

Each of the solar cell arrays is designed to provide 10,500 watts of power at 55 degrees centigrade while in the sunlight portion of each orbit. This will vary between 58 and 69 minutes.

Essentially no power is generated by the solar cells while

the spacecraft is in the earth's shadow. Times in shadow will vary between 25 and 36 minutes.

Whatever power is needed to operate the Workshop and ATM is taken from the arrays. The remainder of the power generated is diverted to battery chargers which keep the nickel-cadmium batteries at full charge and ready for use while the cluster is in the earth's shadow.

The average power consumption of a three-bedroom house is about 4,000 watts. The Skylab power systems at peak operation will produce 21,000 watts, or enough for five average houses.



SCHOLARSHIPS TO THREE — Children of three MSC employees were the recipients recently of college scholarships from the Exchange Council. The three who received four-year scholarships from Donald T. Gregory, Chairman of the NASA MSC Exchange Council are L-R: Lee James, son of Mevy H. Jones; George Bradley, son of Mrs. Loreta M. Bradley; and Debbie Langston, daughter of Mrs. Mary D. Langston. Normally two four-year scholarships are awarded each year; however, this year all three recipients were so close in qualifications that the council awarded scholarships to three students.

Credit Union Straight Talk

THAT \$2000 TARGET

The best place for any man or woman's first \$2000 of savings is in his or her Credit Union. This Credit Union, if you're reading "The Roundup."

Why \$2000? For a number of reasons. First of all, for most Members it's worth \$4000 in estate value, \$2000 cash and \$2000 added (no charge) life insurance, for shares put in by insurable Members before age 55.

When you have \$2000 in insurance matched Credit Union shares you are earning a current dividend of 5½% semi-annual. Add to that the price you would pay for the \$2000 of life insurance if you were to buy that much renewable term insurance from a commercial company. Your *true dividend value*, especially for older Members, might look more like 7% or 7½%.

Financial counselors all agree that sound money management means anywhere from three to six months income put aside just to take up shocks. Two thousand may not be enough, but it's a "must" beginning for family security.

Financial Statement as of 5-30-70

Assets	
Loan to members	\$2,653,913.20
Cash resources	49,819.12
Investments	52,493.93
Equipment and Fixtures	4,016.56
Other Assets	13,747.77
TOTAL	\$2,773,990.38
Liabilities	
Accounts payable	\$ 59,653.35
Shares savings	2,593,415.87
Legal reserves	53,349.52
Reserve for contingencies	2,542.48
Undivided earnings	65,029.16
TOTAL	\$2,773,990.38

MADRID

Yes we are still going to Spain and Madrid will be one of the main stops. Don't forget each Member making trip reservations will have a chance for winning \$100 spending money. Drawing will be September 30, 1970. So get your vacation plans ready and let's go to SPAIN. The dates will be October 30-November 7, 1970. Nine glorious days and eight enchanting nights.

Cooper, Laird, and Batson Winners in MSC Golf Tourney

Norman Cooper shot a net 70 to take first place in the championship flight of MSC's Golf Association's fourth tournament of the season.

Other winners of the tournament which was played June 27 at Atascosita Country Club were: Championship Max Engert (73) who tied with Cliff Crouch (73) for second place and third place winners with net 74's were Jim White and Bob Epperson.

First flight winner was Charles Laird who took low net score for the day with a 65. Tie for second place with 70's were John Frere, Jim Smith and E. Weeks.

Bart Batson scored a net 71 and took first place in the second flight. Art Garrison was second with a net 72 and Dave Harris and Sam Sanborn each shot a net 77 to tie for third spot.

The fifth MSC Tournament is set for July 11 at Bear Creek Golf Course. Dick Hart, tournament chairman, urges all MSC association members to get their applications into him at FS 44 no later than July 7.



BEAUTY AND MOON WALKER — Sharon Eilers was one of the prettier visitors to the Astronaut Office. Apollo 11 Moon walker Edwin E. Aldrin was on hand to greet Sharon who is the "Sweetheart" for the University of Houston Engineering School. Miss Eilers, a Behavior Management Science Major at U of H, is a member of the Chi Omega Sorority and was first runner-up for the Miss Texas Universe pageant.

Roundup Swap-Shop

(Deadline for Swap-Shop classified ad is Thursday of the week preceding Roundup publication date. Ads are limited to MSC civil service employees and assigned military personnel. Maximum length is 15 words, including name, office code and home telephone number. Send ads in writing to Roundup Editor, AP3.)

MISCELLANEOUS

Blonde human hair wig, set and styled once, worn 3 times, \$25, 488-3411.

14' Ormand tri-hull fiberglass boat, blue, with chrome bow & side rails, + 40hp outboard, galvanized tilt trailer, A-1 condition, \$795, 877-1657.

Jacobsen 21" reel-type 5-blade lawnmower w/catcher, used 1 season, \$90; 2 sets mattresses & box springs, twin size extra-long, \$60; Eico FM tuner, stereo amplifier, and Electro-voice Aristocrat speaker enclosure, all \$100, 488-3171.

'69 Fabuglas 22' deluxe, 210 1/0, 55 hrs, loaded, tandem trailer, brakes, power winch, cost \$8700, make offer, 488-2679.

One Firestone 500 whitewall tire, 7.75x14, 11/32" tread depth, \$20; one Roto-broil, excellent, \$8, 488-1782.

Resident membership in CLC Country Club, \$300 (includes transfer fee) 488-5021.

Finn 14½' fiberglass sailboat, Olympic class, fully rigged & ready to sail, good condition, includes trailer, \$595, x3576, Finlayson, or 591-3446.

Standel 70-watt amplifier, two 12" Lanzing speakers for guitar, \$175, x3254, Baker, or 986-5009.

Sale or trade: 5-string Kay banjo, hardly used, cost \$120, now \$75 firm, x3286, Plauche, or 474-2660.

Upright Frostfree freezer, 17.5 cu. ft., very good condition, \$125; 534-2354.

Early American Divan, extra-long (9 ft.) very good condition, \$125, 534-2354.

Portable White Dressmaker sewing machine with carrying case, never used, sacrifice for \$70; Child's 20" AMF bicycle, balloon tires and coaster brakes, \$10; Montgomery Ward refrigerator-freezer, good condition, \$45, x4247, Kavanaugh.

Professionally made 8-track, 1-hr. stereo tapes, your records or mine, 644-8501 after 7 pm.

15 hp Michigan Marine Senior Twin engine, Paragon gear, strtr-gen kaput, 290 lbs, 932-4472.

Gas dryer in working condition, now in use, man with ingenuity could easily put in A-1 shape, \$45, 877-1328.

Martin alto saxophone with case, \$125 or best offer, 946-7415.

'68 Wilson X-38 irons (2-9), PW, SW; '69 Wilson Xgen woods (1-4), cordline grips, stiff shaft, D-4 swingweight, xcent condition, \$135, Bob Regelbrugge, x5276.

Sewing machine, Singer, \$90, J. J. Liddell, 471-4448.

AM Radios, auto, push-button, 6 volt, \$15 or 12 volt \$15, J. J. Liddell, 471-4448.

Stereo tape recorder, \$30; Fiberglass/sailboat, \$80, Bob Walker, x4302.

Delta Capacitive discharge ignition system, group order, \$25, x3966, Bobo.

Lady Kenmore deluxe washer, 16 lbs, 10 cycles, used three months; Coldspot air conditioner, 16,500 BTU, 220 V, used two months; Bob Durand 488-2184.

Finn 14 ½' fiberglass sailboat, olympic class, fully rigged and ready to sail, good condition, includes trailer, \$595, Finlayson x3576.

Boat, 14 ft. fiberglass, 48 hp elec mtr, small-wheel trailer, clean \$450, ca1 after 5 pm. 479-1295.

Hammond C2 Organ, HR40 speaker, walnut, exclnt, one-third cost, also rollaway bed, 488-2289.

Adjustable window fan, used one week, reversible safety blades, \$25 x5566 or Biggs at 926-4121.

Wrought iron fireplace set, draw curtain, and irons, tools \$22, Brown x5470 or 658-4652.

Long dome fall, medium brown (#3), worn five times, regular \$69 for \$40, Mary Dennis, 487-0046.

Box springs & innerspring mattresses; all-porcelain stove 42" (Roper), five piece breakfast set, formica top. All exclnt condition, call MI 3-9738 after 6 pm.

"NEW" Johnson 6 hp motor, perfect condition, cost \$320 must sell for \$229. Call Jeff Horton 877-4102.

Daisy BB gun model 99 "target special" \$9, Jeff Horton, 877-4102.

Schwinn girls 26 inch bike, good condition, \$19. Call 877-4102.

Large 15'x20' oval wool hooked rug, exclnt condition, \$40; hand crochet bed spread, \$50; 649-2569.

Poloroid 100 camera, flash, portrait kit, filters, automatic shutter timer, leather case \$60. ext. 2621, Ward. 488-3847.

Den furniture, sofa, easy chair, cocktail and end tables, good condition \$175, ext 2918 Vang.

Pair bronze sheet winches for 18'-27' sailboat, with handles. \$50, Dennett, ext. 3441 or 877-4506.

Baby highchair, Lillian, ext. 7341 or 649-7516.

PETS

Free Weimaraner female, 2 yrs old, needs good home, x2628, Wade.

Free: 3 female puppies, mother toy terrier, father mixture but also small and short-haired, make good lap dogs, x4247, Kavanaugh.

Gerbil babies for sale \$2 each. More loveable, odorless, than hamsters. 591-4144.

AKC Collie pups, female, 6 wks old, \$65. Ext. 4117, Arndt or 482-3989.

Free kittens, six wks old, come from good line of mousers, Arndt ext 4117 or 482-3989.

Pure bred Alaskan puppies, born June 1, for sale. Call A. R. Gregory 488-3702.

Beautiful Siamese cats, blue points, make ideal gifts, call 474-2489.

REAL ESTATE

Fairmont Park 3-2-2 approx. 2,000 sq. ft., central air/heat, built-ins, storage, trees, large lot, unusual patio, 5¼% loan \$24,000, medium equity GR1-2814.

Rent: \$125 month, 2-1½-1 duplex, nice wooded lot, Webster, after 7, Webb 932-3816. vY6, eemMs/lat ooE.b2, kteet5,

Pasadena: 3-2-2 brick, central air/heat, built-ins, fence, huge trees & patio. Walk to schools. 5¼% VA. \$146, \$5300 equity. 944-2138.

El Lago, 4-2-2, carpet, drapes, fireplace, large secluded backyard, assume 6%, 877-2165.

AUTOMOBILES

'66 MGB, good condition \$600, x6231, Patsy Green, or 946-1427 after 6 pm.

'63 Impala, power steering, factory air, one owner, \$700, 932-2065.

'66 VW bus, \$950; '60 VW bus w/64 engine, \$300; Bob Walker, x4302.

'69 VW, r/h, white/red leatherette intr, exclnt cond., 932-2982.

Ford Fairlane, 298-V8, r/a/c, F. C. Littleton, 474-3418.

'67 VW Bus, radio, sun roof, gas heater, exclnt condition, \$1500 or best offer. 591-4144.

'65 Mustang, V-8, automatic, air, new tires, clean \$650, Kirkland, 932-4101.

'69 Dune Buggy, red metal flake, Volks engine, wide tires, top and curtains, J. Streit, ext 4358 or 482-1559.

'69 Corvette, 360 cubic inch automatic transmission. Best offer, 591-3921.

'65 Olds Jetstar '88, fordor hardtop. Loaded, exclnt condition, inland car. Original owner \$395. Ext. 2341 Schnutt.

'66 2 dr Fairlane XL, buckets, automatic transmission, near perfect condition, \$1,300. LeCroix, 877-2479.

'66 Pontiac Bonneville, 4-dr hardtop, white, factory air, good condition, \$1,450. ext. 3126, Glicker or 488-5648.

WANTED

Infant layette; sterilizer set and bottles, 944-8840.

Being transferred to Seattle, Washington, need driver for second car, 591-2255.

Motherly woman to care for infant, 5 days a week, 8 am to 6 pm, 944-8840.

Cabinet, sewing machine. J. J. Liddell, 471-4448.

26" bicycle, any condition, x3966, Bobo.

Girl to share 2-bedroom apartment across from NASA, Goodings, ext 3466 or 591-2093 (after 5 pm.)

Coronet & trombone, used but fair condition. Needed for marching band and not for concert band use. Very Balinas 946-3907 after 6 pm.

Wanted to buy, 4 BR, traditional home in NASA area. Loan assumption from owner preferred. Boykin, 723-4417.

Boating Accident Claims former MSC L&RD Employee

Leon Hodge, a former employee of MSC's Landing and Recovery Division, died in a boating accident June 21 in Chesapeake Bay.

Hodge, age 37, apparently drowned after falling overboard during a sudden wind storm. His body was recovered by the U. S. Coast Guard June 24.

Hodge joined the Langley Research Center in 1955 and was a member of the NACA Space Task group which later formed the nucleus of the Manned Spacecraft Center.

He returned to Langley in August, 1966 and was assigned to the Viking Project Office at the time of his death.

He is survived by his wife Suzanne and four children.

The family requests that expressions of sympathy be made in the form of contributions to the Leon Hodge Memorial Scholarship Fund, Christopher Newport College, Box 670, Newport News, Va. 23606. Contributions may be sent direct to the above address or, for the convenience of MSC employees, the Space Shuttle Program Office, Room 563, Bldg. 2, will collect and forward contributions to the scholarship fund.

LSI Lecture Series July 6-8 to Feature Dr. Runcorn

Prof. S. Keith Runcorn, of the University of Newcastle Upon Tyne, England, will present a series of lectures at the Lunar Science Institute July 6-8, 1971.

Dr. Runcorn is Head of the School of Physics and Professor of Physics at the University of Newcastle. The title, date and time of his lectures are: "Convection in the Earth and Moon," July 6 at 3 p.m.; "Changes in the Earth's Rotation" July 7 at 3 P.M.; "Implications of the Magnetic Analysis of Lunar Samples," July 8 at 2 P.M.

The lectures are open to MSC, contractor, and university personnel and will be held at the Berkner Lecture Room at the LSI, adjacent to MSC.

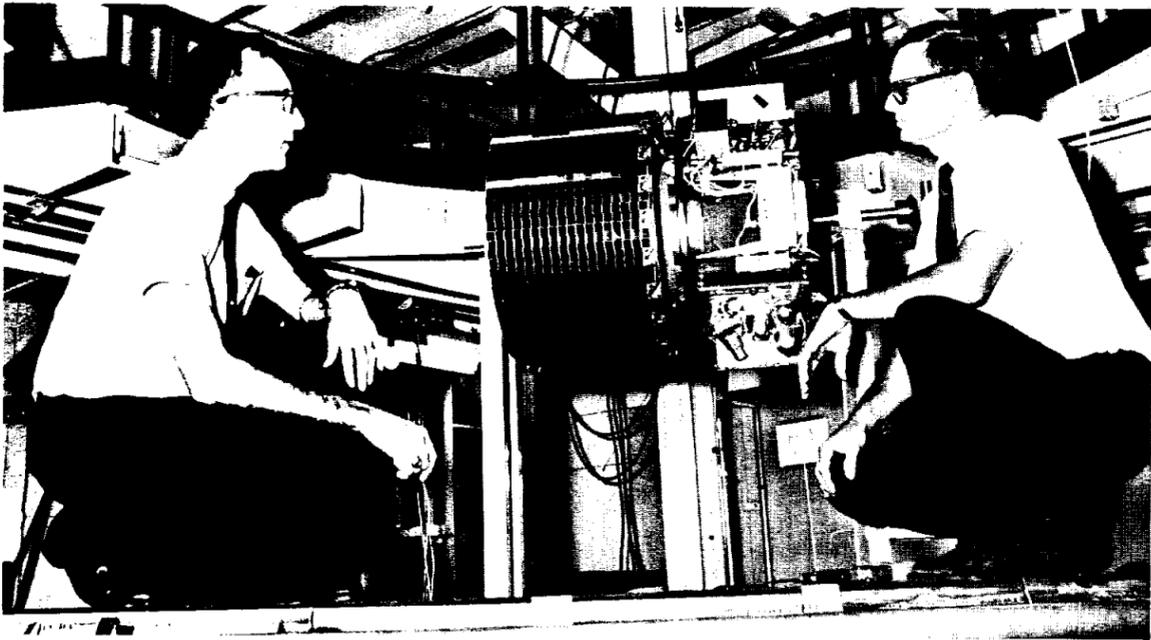
ROCKETS—Cont'd from page 1

State champions in their respective divisions were:

Berry Friedrichs, Houston, Junior Division; John Aiualasit, Junior Division Reserve Champion.

Joe S. Rowe, and E. E. Rowe, Arlington, Texas, Senior Division; Tally Guill, Houston, Senior Division Reserve.

Bob De Leon, Houston, Leader Division, and Mark Evans of Houston, Leader Division Reserve.



PIGGYBACK SATELLITE — The Radiation Meteoroid experiment satellite which is scheduled to be launched aboard the Scout OFO late this month receives a pre-test look by Jerry Haptonstall (left) and Bill McAllum. Haptonstall, Laboratory Support Section of the Institutional and Procurement Division, is contract negotiator for the R/MS project at MSC and McAllum of the Skylab Experiments Office, Earth Orbital Missions Office, is project manager. The R/MS satellite recently underwent thermal-vacuum testing at MSC before shipment to the Wallops Station, Virginia launch site.

Control of Tiros Given to ESSA

The first of the second generation of weather satellites designed for operational use by the Environmental Science Services Administration has been checked out by the National Aeronautics and Space Administration and will be turned over today to ESSA by NASA for operational duty.

Improved TIROS Operational Satellite-1 (ITOS-1), launched from the Western Test Range, Lompoc, Calif., Jan 23 by NASA, was given an exhaustive five-month engineering checkout before it was declared ready for operational use. NASA developed and paid for this first ITOS with later spacecraft to be paid for by ESSA.

COOPER—Cont'd from Page 1 APOLLO 14—

Cooper attended public schools in Shawnee, Oklahoma, and received a BS degree in Aeronautical Engineering from the Air Force Experimental Flight Test Schools at Edwards Air Force Base, California, in 1957, and assigned as an aeronautical engineer and test pilot at Edwards.

Cooper has received many honors and decorations including the Distinguished Flying Cross with cluster and the NASA Distinguished Service and Exceptional Service Medals.

He and his family will continue to maintain their residence in El Labo where they have lived since 1962 when MSC was transferred from Langley Field, Virginia to Houston.

APOLLO 14—

Cont'd from page 1
30, he has forwarded to Academician M. V. Keldysh of the Soviet Academy of Sciences a copy of the complete Apollo 13 Review Board Report so that lessons which might be learned from the accident can be applied to prevent a similar hazard to Soviet cosmonauts.

Apollo 14 will land in the Fra Mauro region of the Moon, a hilly upland area that was the intended landing site of Apollo 13. The crew will be Capt. Alan B. Shepard, Jr., USN, Commander; Maj. Stuart A. Roosa, USAF, Command Module Pilot; and Cdr. Edgar D. Mitchell, USN, Lunar Module Pilot.

Postponement of Apollo 14 will also move the planned launch date for Apollo 15 several months to July or August 1971, maintaining approximately a 6 month interval between launches.

NEWSMAKERS AT MSC

Charles E. Beckman of the Administration Support Section of the Institutional Resources and Procurement Division is flying high these days following receipt of a letter of commendation from the White House. Beckman was cited by the Office of the President for his interest and participation in local government, his work with the young people in the community and his involvement in church activities. Beckman lives in Pasadena.



Jerry W. Craig, Chief of Thermo Dynamics Materials Branch of ASPO, won the African Powerboat Championships on the Vaal River near Johannesburg. He was first overall, first in unlimited outboards & set a new single lap record in a 21-foot fiberglass twin Johnson 155 Stingers. He set a new single lap record for the 8th annual event with a course run of 72 MPH.

Astronauts Edwin E. Aldrin, Jr., and Thomas P. Stafford presented U. S. military service awards to 80 military assignees at MSC and former military personnel now employed at the center July 26. The awards included the Silver Star, the Legion of Merit, the Meritorious Service Medal, the Air Medal, the Air Force Commendation Medal, the Republic of Viet Nam Service Medal and the Purple Heart.



'LAUNCH CONTROL, THIS IS RANGE CONTROL' — Just like the big time at Cape Kennedy. Officials of the Model Rocketeers of TEXAREA II went through launch and range safety procedures much like NASA follows at the Cape, prior to a manned launch. Local university students assisted in the operations at MSC over the weekend. Tally Guill (left with hat), launch controller and Ben Russell (right), data controller, assisted Charles Biggs, MSC coordinator (center with radio).



Among the recipients at last week's ceremony was a father and son team William W. Fink, Sr., right, and his son Major William Jr., center. The senior Fink was presented the Purple Heart for wounds he received during World War I. Mr. Fink who earned the Distinguished Service Cross for the same action at Remonville, France 51 years ago received the Purple Heart from Col. Stafford during the same ceremony his son received the Silver Star for gallantry in military action in Southeast Asia. Major Fink, is presently assigned to the Flight Control Division at MSC.